

We claim:

1. A centerwinder for receiving and winding a web material comprising:
5 a source for a constant feed of said web material;
at least two winding shafts, said at least two winding shafts are positioned approximately parallel to one another and independently rotate in a stationary structure; and
10 a lay-on arm assembly, said web material passes through said lay-on arm assembly and is wound on one of said winding shafts to a predetermined quantity, said lay-on arm assembly:

15 (i) cuts said web material upon obtaining said predetermined quantity of said web material on said winding shaft; and

15 (ii) transfers said constant feed of said web material to another of said winding shafts.

2. The centerwinder of claim 1 further comprising:

20 a positioning apparatus and a control means for said lay-on arm assembly, said positioning apparatus and said control means maintain a constant pressure of a lay-on roll of said lay-on arm assembly against a roll of said web material as said web material is wound onto said winding shaft.

3. The centerwinder of claim 2 further comprising:

25 a sensor for detecting said predetermined quantity of said web material wound on one of said winding shafts, said sensor signals said control means for said lay-on arm assembly to initiate said cutting and transfer of said web material.

4. The centerwinder of claim 2 wherein said positioning apparatus and said control means for said lay-on arm assembly moves said lay-on arm assembly from said winding shaft having said predetermined quantity of said web material to an empty
5 winding shaft.

5. The centerwinder of claim 2 further comprising:

a pivot means for each of said winding shafts, said pivot means enables each of said winding shafts to swing from a winding position in said centerwinder to position for removing
10 said cut web material from said winding shaft.

6. The centerwinder of claim 5 further comprising:

a spherical support for each of said winding shafts, each said winding shaft pivots on said spherical support.

7. The centerwinder of claim 5 further comprising:

15 a shaft puller, said shaft puller removes each of said winding shafts from said roll of said web material and inserts each of said removed winding shafts into an empty core for receiving web material.

8. A centerwinder for receiving and winding a web
20 material comprising:

a source for a constant feed of said web material;
a first winding shaft and a second winding shaft, said first winding shaft and said second winding shaft are positioned approximately parallel to one another and
25 independently rotate in a stationary structure;

a lay-on arm assembly, said web material passes through said lay-on arm assembly and is wound into a roll on said

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first winding shaft to a predetermined quantity, said lay-on arm assembly:

5 (i) maintains a constant pressure of a lay-on roll against said roll of said web material as said web material is wound onto said winding shaft;

 (ii) cuts said web material upon obtaining said predetermined quantity of said web material on said first winding shaft; and

10 (iii) transfers said constant feed of said web material to said second winding shaft.

9. The centerwinder of claim 8 further comprising:

15 a positioning apparatus and a control means for a lay-on roll assembly of said lay-on arm assembly, said positioning apparatus and said control means operates a knife and a transfer roll mechanism to cut said web material and to transfer a leading edge of said cut web material to said second winding shaft.

10. The centerwinder of claim 9 further comprising:

20 two spherical supports, each of said two spherical supports affixed to one end of each of said first winding shaft and said second winding shaft, said first winding shaft and said second winding shaft both independently pivot on their respective one of said spherical supports.

11. The centerwinder of claim 10 further comprising:

25 a shaft puller, said shaft puller independently removes said first winding shaft and said second winding shaft from said roll of said web material and reinserts said removed

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first winding shaft and second winding shaft into an empty core for receiving web material.

12. A method for continuously winding a constantly fed web material comprising the steps of:

5 feeding said web material through a lay-on arm assembly to at least one rotating winding shaft;

maintaining a constant pressure of a lay-on roll of said lay-on arm assembly against a roll of said web material as said web material is wound onto said winding shaft;

10 sensing a predetermined quantity of said web material on said winding shaft;

cutting said web material upon obtaining said predetermined quantity of said web material on said winding shaft; and

15 transferring said cut constant feed of said web material by a transfer roll mechanism of said lay-on arm assembly to another of said winding shafts.

13. The method of claim 12 wherein said cutting of said web material is performed by a knife of said lay-on arm assembly, said knife and said transfer roll mechanism simultaneously press said constantly fed web material to perform said cutting of said web.

14. The method of claim 13 wherein said lay-on arm assembly moves toward said another of said winding shafts as said roll of said web material is formed.